

**Notice of Allowability**

Application No.	Applicant(s)
09/742,295	SCALORA ET AL.
Examiner	Art Unit
John D. Lee	2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to the amendment received on October 10, 2003.
2.  The allowed claim(s) is/are 1-6 and 8-27.
3.  The drawings filed on 22 December 2000 are accepted by the Examiner.
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some\*    c)  None    of the:
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

5.  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
(a)  The translation of the foreign language provisional application has been received.
6.  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8.  CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a)  including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
    1)  hereto or 2)  to Paper No. \_\_\_\_\_.  
(b)  including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.  
(c)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| 2 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                       | 6 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____.            |
| 3 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No. <u>1202</u> | 7 <input checked="" type="checkbox"/> Examiner's Amendment/Comment                  |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                 | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|   | 9 <input type="checkbox"/> Other _____.   |

### **EXAMINER'S AMENDMENT**

An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR § 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Claims 8 and 23 have been amended as follows.

8. (Amended) The device of claim 1, wherein said arrangement of layers forms a mixed half-eighth wave structure.

23. (Amended) A method of frequency up-converting a photonic signal incident on a device, the device including a plurality of first material layers and a plurality of second material layers, the first and second material layers being arranged such that the device exhibits a photonic band gap structure, wherein the photonic band gap structure exhibits first and second transmission band edges, the method comprising the steps of:

applying a first photonic signal to the first and second material layers, generating a second photonic signal having a second frequency corresponding to the second transmission band edge, wherein a subsequent interaction of the first and second photonic signals with the arrangement of layers causes a mixing process to generate a third photonic signal having a third frequency that is more than the first and second frequencies.

This is an informal Examiner's amendment in accordance with MPEP § 1302.04, correcting a grammatical error and an inadvertent error of transcription, and does not

require specific approval by the applicant. The amendment to claim 8 corrects the inadvertently changed spelling of "half-eighth", and the amendment to claim 23 corrects a grammatical error of "signals" to "signal".

### **EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE**

The following is an Examiner's Statement of Reasons for Allowance: The amendment received on October 10, 2003, has corrected the problems noted in the prior Office action. Further search by the Examiner having uncovered no additional relevant prior art, claims 1-6 and 8-27 remain allowable over the prior art for the reasons set forth in the prior Office action (paper number 8, mailed April 18, 2003).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **DISCUSSION OF THE CITED PRIOR ART**

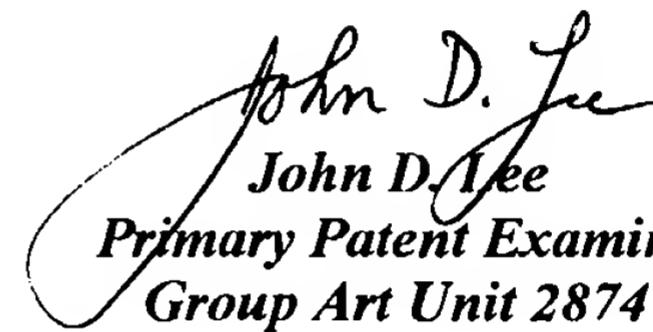
All of the prior art documents submitted by applicant in the Information Disclosure Statement filed December 16, 2002, have been considered and made of record (note the attached initialed copy of form PTO-1449). None of these documents is deemed to have a negative bearing on the patentability of the claims of this application.

Any inquiry concerning the merits of this communication should be directed to Examiner John D. Lee at telephone number (703) 308-4886. The Examiner's normal work schedule is Tuesday through Friday, 6:30 AM to 5:00 PM. Any inquiry of a general or clerical nature (i.e. a request for a missing form or paper, etc.) should be directed to

Application/Control Number: 09/742,295  
Art Unit: 2874

Page 4

the Technology Center 2800 receptionist at telephone number (703) 308-0956, to the technical support staff supervisor (Team 2) at telephone number (703) 308-3072, or to the Technology Center 2800 Customer Service Office at telephone number (703) 306-3329.

  
John D. Lee  
Primary Patent Examiner  
Group Art Unit 2874